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**Subject: ADDITIONAL SOIL SAMPLING CHARACTERIZATION OF PCB
 RISK-BASED CLEANUP FOR EPA APPROVAL § 761.61(c) - Old
 Pauwel's Transformer Plant located at 100 W. 10th St., Washington, MO**

Dear Stacy:

This is an update of the subject site PCB contamination characterization that has been performed during the past two years with the overall goal of gaining approval for the risk based cleanup. A portion of the 5 acre site at the rear of the former Pauwel Transformer manufacturing facility that was in operation at the site from the 1960's to 1990's is contaminated with PCB's above 50 mg/kg (ppm) dry weight and is therefore the subject of seeking EPA approval for cleanup. The site is bordered by 10th St. to the north, residential above grade to the east, and 11th St. commercial sites to the south, and industrial sites downgrade and to the west. Transformer manufacturing, processing, storage, above ground storage tanks (AST's) of pcb product (AST's have been removed) and management offices, was located on site.

So far 97 soil samples have been collected in the location at the rear of the plant. PCB's were detected in 90% of the soil samples analyzed for these compounds. Detected concentrations range from 0.086 mg/kg (ppm) to 8,430 mg/kg (ppm). Soils containing more than 100 mg/kg (ppm) PCB's are generally limited to **Area (A)**: the 40 X 80 ft. area just downgrade and west of the former aboveground storage tank area where the concrete containment still exists. Surface soil contamination below 10 mg/kg (ppm) exists over a wider portion of the site downgrade from the Area (A).

For the purpose of reducing the amount of soil that will be required to be excavated and hauled to an approved landfill, additional soil sampling will be performed during the next two weeks. Thirty soil (30) samples will be collected at 2 ft and 4 ft depths in 15 locations spread out on a 20 ft. grid to cover the Area (A) section. By pinpointing the exact locations of the highest contaminated soil will help reduce the amount of soil removed during remediation excavation.

Soil samples will be collected using a Geoprobe drill rig 2 ft and 4 ft. depths. Geoprobe soil samples were collected using push techniques used to push the two-inch diameter core sampler into the subsurface. The rods/macro-core receive the driving force from the percussion hammer of the Geoprobe. A disposable

The self-implementing cleanup level (i.e., the “walk-away” level) under EPA Section 761.61(b) for soil and porous surfaces in high-occupancy (e.g., residential) areas is less than or equal to 1 ppm. Cleaning up the site to this level of acceptable residential would create no restrictions in the future, and would not require EPA oversight during remediation.

To clean the site to less than or equal to 10 ppm if the soil is capped [Section 761.61(a)(4)(i)(A)]. EPA would have oversight and we would have to get prior approval from EPA for the plan. The cleanup level in low-occupancy areas is less than or equal to 25 ppm to less than or equal to 100 ppm, depending on site conditions [Section 761.61(a)(4)(i)(B)(1-4)]. Site conditions which would allow for remaining PCB concentrations to be greater than 25 ppm PCBs include: 1) greater than 25 ppm and less than or equal to 50 ppm—site secured by a fence and signage; 2) greater than 50 ppm and less than or equal to 100 ppm—site covered by a cap. In the regulatory text, a cap is defined as a minimum of 10 inches of compacted soil or 6 inches of concrete or asphalt to prevent or minimize human exposure, infiltration of water, and erosion [Section 761.61(a)(7)]. Deed restrictions may also need to be in place. Site-specific factors may warrant additional cleanup to levels lower than those included in the USEPA PCB regulations summarized above upon finding that remediation is required to prevent unreasonable risk. Potential site-specific factors include: PCB site is adjacent to ecologically-sensitive habitat; PCB site has the potential to affect groundwater or surface water; or location of the PCB site has a high potential for exposure. Remediation in accordance with 40 CFR 761.30(p) involves both the removal of the PCB source and superficial surface cleaning.

Previous Soil Sampling

Previous soil sampling for PCB analysis was conducted across the site in 2011 - 2013, which is discussed in greater detail in previous reports. Some of the 127 soil samples analyzed for PCBs

had a PCB concentration above the TSCA regulatory threshold of 50 mg/kg. Sample No. 35 (2 ft) contained 8,430 mg/kg of PCBs (Aroclor 1260). Sample No. 34 was collected at 2 ft. depth on January 6, 2012, in the hot spot (Area A) and had a result above 3,460 mg/kg. The hot spot area is located just west of the concrete containment of the former aboveground storage tank area and noted as Area A. Additional in-place characterization of PCBs in the vicinity of the hot spot (Area A) is necessary prior to excavation of this section of the site, in accordance with TSCA regulations. The additional 30 soil samples were collected on a 20 ft. grid at depths of 2 ft. and 4 ft. on October 31, 2013, and lab analysis results are attached to this report along with a sketch of sample locations.

Proposed cleanup is soil removal

To make the site safe and ready to sell Enviroworld Consulting, LLC, proposes to remove all soil with PCBs above 1 part per million and dispose of it at an approved off-site facility. Under this proposal the site would be taken to acceptable residential levels. The project workers would: excavate about 500 cubic yards of PCB contaminated soil over the approximately 1 (one) acre area excavate and scrape to a maximum depth of two feet in most areas, and to 4.5 ft. in some portions of this area where higher levels of contamination were found in those areas, keeping the excavated soil in lined and covered piles at the site until it can be transported, or load the soil directly into lined roll-off bins or trucks and take the soil by covered truckloads to an approved offsite disposal facility. We would then take follow-up soil samples to make sure the contaminated soil has been removed.

Truck routes and frequency. Trucks would take on-site access roads east and turn right on Jefferson Street, to left on Highway 100, to Interstate 44, to Interstate 70, and then to an approved landfill in St. Louis, or to the TSCA landfill site located in Indianapolis, IN. The most

contaminated soil would be taken to the hazardous waste landfill in Indianapolis, IN. Less contaminated soil <50 ppm would be taken to other approved facilities in the St. Louis area. We estimate that about 30 truckloads would be needed to haul away the excavated soil. Truck traffic would be between 7 a.m. and 6 p.m. Monday through Friday.

Dust control and worker safety. Work would be done in accordance with OSHA 29 CFR 1910.120 requirements. All onsite workers would have 40 Hazardous Waste Operations Training (HAZWOPER) and wear proper personal protective equipment. A Written Site Safety Plan would be on site. To control dust during excavation and hauling, the contractor performing the cleanup would lightly spray the soil and trucks with water. Excavated soil piles would be covered with plastic sheeting, as would truckloads of soil. We would also monitor the air at the perimeter of the excavation to make sure it stays at safe levels. Workers would wear masks, if necessary, and protective clothing since they would be in close contact with the soil. The excavation, removal, and follow-up sampling are estimated to take two to three months.

Other cleanup options considered

As you know, we evaluated various cleanup options to determine which was the best choice based on effectiveness, implementability, and cost. The effectiveness of a cleanup option is largely based on the level of protection of human health and the environment that it provides. Two other options were to: 1) take no action; and 2) place a cap over the contaminated soil and restrict access to the site. The first option is not acceptable because it allows the contamination to remain exposed. The second option prevents exposure, is feasible, and has a reasonable cost. However, it has a long-term cost for monitoring and maintaining of the cap, and would restrict the resale of the property.

No environmental impact

As required, we looked at whether the cleanup actions (the digging, hauling, etc.) would harm the environment by raising excess dust or disturbing habitat. We determined that the cleanup would have no impact on the environment due to the small volume of soil, the limited area, and the short duration of the project.

The investigation included 138 soil samples taken from 111 locations. Soil sampled at various depths from the surface down to 8 feet in some locations. Drilling refusal occurred at some borings at the 4 to 5 ft. depth. The attached map shows the sampling locations and the proposed cleanup area. Full details are in the investigation report.

Investigation results

Sampling results from the investigation results show that:

- Soil in several places within a 1-acre area is contaminated with PCBs at levels requiring cleanup. One sample in this area showed a level of 8,340 parts per million of PCBs. Overall, 60% of the soil samples showed PCBs at levels requiring cleanup. The contamination is confined to the 1-acre area within the Pauwel's Transformer (CG Power Systems, USA, Inc.) boundary.

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Although a voluntary cleanup under EPA rules 761.61(b), we will discuss this cleanup plan with EPA. The cleanup is planned to begin during early 2014.

Feel free to contact me if you have any questions.

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Environmental Consultant
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